

AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the prior application:

Claim ¹~~45~~. (currently amended) A transformed plant, a plastid of which comprises:

- (a) a polypeptide encoded by a nucleotide sequence encoding a branched chain oxoacid dehydrogenase complex E1 α subunit protein, said nucleotide sequence selected from the group consisting of:
- (i) the nucleotide sequence shown in SEQ ID NO:11, or the complement thereof;
 - (ii) a nucleotide sequence that hybridizes to said nucleotide sequence of (i) under a wash stringency equivalent to 0.1X SSC ~~to 2.0X SSC~~, 0.1% SDS, at ~~55-65°C~~ 55°C, and which encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E1 α subunit by about 30% or less;
 - (iii) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (i), but which is degenerate in accordance with the degeneracy of the genetic code; and
 - (iv) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (ii), but which is degenerate in accordance with the degeneracy of the genetic code;
- (b) a polypeptide encoded by a nucleotide sequence encoding a branched chain oxoacid dehydrogenase complex E1 β subunit protein, said nucleotide sequence selected from the group consisting of:

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- (i) the nucleotide sequence shown in SEQ ID NO:13, or the complement thereof;
 - (ii) a nucleotide sequence that hybridizes to said nucleotide sequence of (i) under a wash stringency equivalent to 0.1X SSC ~~to 2.0X SSC~~, 0.1% SDS, at ~~55-65°C~~ 55°C, and which encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E1 β subunit by about 30% or less;
 - (iii) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (i), but which is degenerate in accordance with the degeneracy of the genetic code; and
 - (iv) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (ii), but which is degenerate in accordance with the degeneracy of the genetic code;
- (c) a polypeptide encoded by a nucleotide sequence encoding a branched chain oxoacid dehydrogenase complex E2 component protein, said nucleotide sequence selected from the group consisting of:
- (i) the nucleotide sequence shown in SEQ ID NO:15, or the complement thereof;
 - (ii) a nucleotide sequence that hybridizes to said nucleotide sequence of (i) under a wash stringency equivalent to 0.1X SSC ~~to 2.0X SSC~~, 0.1% SDS, at ~~55-65°C~~ 55°C, and which encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E2 subunit by about 30% or less;

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- (iii) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (i), but which is degenerate in accordance with the degeneracy of the genetic code; and
 - (iv) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (ii), but which is degenerate in accordance with the degeneracy of the genetic code; and
 - (d) ~~a polypeptide encoded by a nucleotide sequence encoding an enzyme that enhances the biosynthesis of~~
2-oxobutyrates an enzyme selected from the group consisting of aspartate kinase, homoserine dehydrogenase, threonine synthase, and threonine deaminase.

Claim ²~~46~~. (previously presented) The plant of claim ¹~~45~~, wherein:

- (a) the nucleotide sequence in (a)(ii) encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E1 α subunit by about 20% or less;
- (b) the nucleotide sequence in (b)(ii) encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E1 β subunit by about 20% or less; and
- (c) the nucleotide sequence in (c)(ii) encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E2 component by about 20% or less.

Claim ³~~47~~. (previously presented) The plant of claim ¹~~45~~,
wherein:

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- (a) the nucleotide sequence in (a)(ii) encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E1 α subunit by about 10% or less;
 - (b) the nucleotide sequence in (b)(ii) encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E1 β subunit by about 10% or less; and
 - (c) the nucleotide sequence in (c)(ii) encodes a polypeptide having enzymatic activity differing from that of *Arabidopsis thaliana* branched chain 2-oxoacid dehydrogenase complex E2 component by about 10% or less.

Claims 48-51. Canceled.

Claim ⁴~~52~~. (currently amended) The plant of claim ¹~~45~~, wherein

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- (a) the nucleotide sequence encoding a branched chain oxoacid dehydrogenase complex E1 α subunit protein is SEQ ID NO: 11;
 - (b) the nucleotide sequence encoding a branched chain oxoacid dehydrogenase complex E1 β subunit protein is SEQ ID NO: 13; and
 - (c) the nucleotide sequence encoding a branched chain oxoacid dehydrogenase complex E2 component protein, is SEQ ID NO: 15, and
 - (d) ~~the nucleotide sequence encoding an enzyme that enhances the biosynthesis of 2-oxobutyrates is selected from the group of nucleotide sequences consisting of those that~~

~~encode aspartate kinase, homoserine dehydrogenase,
threonine synthase, and threonine deaminase.~~

Claim ⁵~~53~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the enzyme that enhances the biosynthesis of
2-oxobutyrates is aspartate kinase.

Claim ⁶~~54~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the enzyme that enhances the biosynthesis of
2-oxobutyrates is homoserine dehydrogenase.

Claim ⁷~~55~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the enzyme that enhances the biosynthesis of
2-oxobutyrates is threonine synthase.

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Claim ⁸~~56~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the enzyme that enhances the biosynthesis of
2-oxobutyrates is threonine deaminase.

Claim ⁹~~57~~. (previously presented) The plant of claim ¹~~45~~,
wherein the plant is a monocot.

Claim ¹⁰~~58~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the plant is a monocot.

Claim ¹¹~~59~~. (previously presented) The plant of claim ¹~~45~~,
wherein the plant is a dicot.

Claim ¹²~~60~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the plant is a dicot.

Claim ¹³~~61~~. (previously presented) The plant of claim ¹~~45~~,
wherein the plastid is a seed plastid.

Claim ¹⁴~~62~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the plastid is a seed plastid.

Claim ¹⁵~~63~~. (previously presented) The plastid of claim ¹³~~61~~,
wherein the seed plastid is a leucoplast.

Claim ¹⁶~~64~~. (previously presented) The plastid of claim ¹⁴~~62~~,
wherein the seed plastid is a leucoplast.

Claim ¹⁷~~65~~. (previously presented) The plant of claim ¹~~45~~,
wherein the plastid is a leaf chloroplast.

Claim ¹⁸~~66~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the plastid is a leaf chloroplast.

Claim ¹⁹~~67~~. (previously presented) The plant of claim ¹~~45~~,
wherein the plant is *Arabidopsis*.

Claim ²⁰~~68~~. (previously presented) The plant of claim ⁴~~52~~,
wherein the plant is *Arabidopsis*.